STATE FOREST LAND
ENVIRONMENTAL CHECKLIST

Purpose of Checklist:

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decided whether an EIS is required.

Instructions for Applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can. *Questions in italics are supplemental to Ecology's standard environmental checklist. They have been added by the DNR to assist in the review of state forest land proposals. Adjacency and landscape/ watershed-administrative-unit (WAU) maps for this proposal are available on the DNR internet website at http://www.dnr.wa.gov under "SEPA Center." These maps may also be reviewed at the DNR regional office responsible for the proposal. This checklist is to be used for SEPA evaluation of state forest land activities.*

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later. *All of the questions are intended to address the complete proposal as described by your response to question A-11. The proposal acres in question A-11 may cover a larger area than the forest practice application acres, or the actual timber sale acres.*

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Use of checklist for nonproject proposals:

Complete this checklist for nonproject proposals, even though questions may be answered " does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NON PROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer" and "affected geographic area," respectively.

A. BACKGROUND

1. Name of proposed project, if applicable:

   Timber Sale Name: **Polyester Plaid** *Agreement #:* **30-076379**

2. Name of applicant:

   Washington Department of Natural Resources

3. Address and phone number of applicant and contact person:

   Pacific Cascade Region
   P.O. Box 280
   601 Bond Road
   Castle Rock, WA 98611

   Contact Person: Black Hills District Manager
   Phone # (360) 577-2025

4. Date checklist prepared:

   May 11, 2004

5. Agency requesting checklist:

   Washington Department of Natural Resources

6. Proposed timing or schedule (including phasing, if applicable):

   a. *Auction Date:* **2005**
   b. *Planned contract end date (but may be extended):* **2006**
   c. *Phasing:* **N/A**

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

   Timber Sale

   a. Site preparation: **Site prep will ensure that planting can be achieved at acceptable stocking levels that meet Forest Practices rules.**
   b. Regeneration Method: **Hand planting or seedlings will naturally regenerate.**
   c. Vegetation Management: **Treatment will be based on vegetative competition, and will ensure a free-to-grow status, which complies with Forest Practices rules.**

d. Thinning: **As needed to meet desired density, stocking, and growth.**

Roads: Routine road maintenance, periodic ditch and culvert cleaning as necessary. Construction, reconstruction, and abandonment are associated with forest management activities.

Rock Pits and/or Sale: **Rock may be removed from the State's Vantage Quarry and/or a commercial rock source. Vantage Quarry will be expanded under this proposal. The Quarry will be used for future road construction activities associated with forest management operations.**

Other: **Firewood permits for the sale area may be available to the public if, after harvest, downed wood is plentiful near roadsides. Landing debris may be burned upon completion of logging.**

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

☐*303 (d) – listed water body in WAU:* ☐*temp* ☐*sediment* ☐*completed TMDL (total maximum daily load):*
☐*Landscape plan:*
☐*Watershed analysis:*
☐*Interdisciplinary team (ID Team) report:*
☒*Road design plan:* **Available at Pacific Cascade Region Office**
☐*Wildlife report:*
☐*Geotechnical report:*
☐*Other specialist report(s):*
☐*Memorandum of understanding (sportsmen's groups, neighborhood associations, tribes, etc.):*
☒*Rock pit plan:* **Available at Pacific Cascade Region Office**
☒*Other:* **Forest Resource Plan, dated July 1992; State Soil Survey; Washington State Department of Natural Resources Habitat Conservation Plan, dated September 1997; South Coast Planning Unit Marbled Murrelet Habitat Reclassification Map, dated November 1999; ESA listed Salmonid Species Map from Forest Practices, dated 1999.**

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

None known.

10. List any government approvals or permits that will be needed for your proposal, if known.

☒*HPA,* **Blanket Hydraulic Permit Application, Log Number ST-D9199-04** ☒*Burning permit* ☐*Shoreline permit* ☒ *Incidental take permit,* **ITP 1168 and PRT-812521** ☒*FPA #* _____ ☐*Other:*

11. Give brief, complete description of our proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include specific information on project description.)

a. Complete proposal description: **Approximately 187 acres of 71-75 year old timber were considered for harvest with the Polyester Plaid Timber Sale. Of the 187 acres, 27 acres were bounded out as RMZs and 2 acres of wildlife reserve trees were bounded out of the sale boundaries. The sale area consists of approximately 158 acres. There are approximately 2 acres of right of way timber that will be harvested. Within the 156-acre sale area, 14 acres will be designated as scattered or clumped wildlife reserve trees inside the unit boundaries. Unit # 1 contains 73 acres, Unit #2 contains 36 acres and Unit #3 contains 47 acres. Within Unit #1 there will be approximately 7 acres of wildlife reserve trees. Within Unit #2 there will be approximately 2 acres of wildlife reserve trees left and 2 acres will be left outside of the unit. Within Unit #3 there will be approximately 5 acres of wildlife reserve trees left. Approximately 1344 feet of road will be abandoned: 775 feet of the E-2100 road, Spur 1Z, Spur 3B, Spur 3C and Spur 3D. There will be 9020 feet of new road construction. There will be 3725 feet of road reconstruction.**

The harvest units will be replanted after completion of harvest or naturally regenerated. Riparian Management Zones (RMZs) have been designated along three type 3 and one type 4 streams. Approximately 1264 trees will be left for green tree and snag trees. In all units the leave trees will be left individually and in clumps scattered throughout and adjacent to the units. Further forest management activities may be scheduled as shown in question A.7.

b. Timber stand description pre-harvest (include major timber species and origin date), type of harvest, overall unit objectives.

Pre-Harvest Stand Description: **Timber types in the units are dominated by 71-75 year old Douglas-fir, mixed with red alder, western hemlock and western redcedar. Sword fern, Oregon grape, vine maple, huckleberry, wild rose, elderberry, and salal are scattered throughout the units with salmonberry and devil's club found in the wet areas.**

Type of Harvest: **This proposal involves an even-age regeneration harvest of timber on 156 acres and 2 acres of right-of-way harvest. Wildlife trees will be left in scattered clumps or individually scattered trees within or adjacent to Units #1, #2 and #3. The harvest methods for this proposal will be tracked equipment on Unit #3 and cable and tracked equipment on Unit #1 and #2.**

Overall Unit Objectives: **The overall objectives for these forest management units includes the production of sawlogs, poles, and pulp material while managing the stands to enhance wildlife habitat by developing vertical stand structure and age class distribution. This may be obtained through the retention of wildlife and legacy trees and Riparian Management Zones averaging between 196 and 198 feet wide adjacent to three type 3 streams and at least 100 feet wide along one type 4 stream. In addition, these stands will be managed in a manner to maintain site productivity and the integrity and water quality of adjacent streams.**

c. Road activity summary. See also forest practice application (FPA) for maps and more details.

Type of Activity	How Many	Length (feet) (Estimated)	Acres (Estimated)	Fish Barrier Removals (#)
Construction		9020	12	0
Reconstruction		3725		0
Abandonment		1344	2	0
Bridge Install/Replace	0			0
Culvert Install/Replace (fish)	0			0
Culvert Install/Replace (no fish)	5			

12. Location of proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. *(See timber sale map. See also color landscape/WAU map on the DNR website http://www.dnr.wa.gov under "SEPA Center.")*

a. *Legal description:*

Sections 9, 16, 17, 18 and 20 of Township 16 North, Range 04 West, W.M.

b. *Distance and direction from nearest town (include road names):*

Unit #1 is located off the E-2000 and is approximately 7 miles, by road, north of Oakville, WA. Unit #2 is located off the E-2100 and is approximately 6 miles, by road, north of Oakville, WA. Unit #3 is located off the E-2000 and E-2300 and is approximately 8 miles, by road, north of Oakville, WA.

c. *Identify the watershed administrative unit (WAU), the WAU Sub-basin(s), and acres. (See also landscape/WAU map on DNR website http://www.dnr.wa.gov under " SEPA Center.")*

WAU Name	WAU Acres	Proposal Acres
Cedar Creek	**31,258**	**187**

Sub-Basin Name	Sub-Basin Number	Proposed Acres
Cedar Creek	**7**	**10**
Cedar Creek	**9**	**148**

13. *Discuss any known future activities not associated with this proposal that may result in a cumulative change in the environment when combined with the past and current proposal(s). (See digital ortho-photos for WAU and adjacency maps on DNR website http://www.dnr.wa.gov under "SEPA Center" for a broader landscape perspective.)*

- **Cedar Creek WAU: Approximately 93% of the Cedar Creek WAU is managed forestland with the other 7% being residential homes, including the town of Oakville, and farmland. Ongoing residential development appears to be slow. The residential area is concentrated in the southwest part of the WAU.**

DNR manages approximately 25,530 acres in the Cedar Creek WAU (82% of the 31,258 acre WAU). The uplands are mainly managed for timber production. Ownership includes large industrial forests and small private forest (11% of the WAU). From observations approximately 300 acres have had some harvest activity from these ownerships. Forest stands within the WAU appear to be almost exclusively second and third growth stands. The number of Forest Practices shown on the WAU map (referenced above on the DNR website) along with observations within the WAU indicates the forests appears to be managed. Management includes timber harvest, recreational activities, protecting wildlife habitat and water quality. Approximately 62% of the land managed by the DNR in the Cedar Creek WAU is covered with vegetation greater than 25-years-old.

Within the Cedar Creek WAU in the past 3 years DNR has mitigated impacts to water quality, wildlife and fish by the removal of 5 fish blockage culverts, repairing 1 fish blockage culvert, and abandonment of 8.2 miles of road to reduce impacts to streams. Paving the C-Line road over fish stream crossings has been done to reduce impacts to streams from road sediment delivery. The previous mentioned activities have had an impact to the public recreational user by changing how the forest is accessed. By abandoning roads that impact streams the recreational user can now only access the same general areas by walking.

The following table is an estimated summary of past and future activity on DNR-managed land and privately managed land in the WAU (information is based off of Forest Practices applications that have been approved in the last seven years compiled by the Department's GIS database). No attempt was made to predict future timber harvest on private ownerships within the WAU.

	WAU ACRES/SUB-BASIN ACRES	ACRES OF EVEN-AGED HARVEST WITHIN THE LAST SEVEN YEARS	ACRES OF UNEVEN-AGED HARVEST WITHIN THE LAST SEVEN YEARS	PROPOSED ACRES OF EVEN-AGED HARVEST IN THE FUTURE	PROPOSED ACRES OF UNEVEN-AGED HARVEST IN THE FUTURE
Cedar Creek WAU					
DNR MANAGED LAND	**25,530**	**3,045**	**1,698**	**~619**	**~431**
PRIVATE OWNERSHIP	**5,728**	**402**	**106**	**UNKNOWN**	**UNKNOWN**
TOTAL	**31,258**	**3,447**	**1,804**	**~619**	**~431**
Cedar Creek WAU, SUB-BASIN 7					
DNR MANAGED LAND	**4,838**	**407**	**240**	**~100**	**0**
PRIVATE OWNERSHIP	**2,880**	**UNKNOWN**	**UNKNOWN**	**UNKNOWN**	**UNKOWN**
TOTAL	**7,718**	**~407**	**~240**	**~100**	**~0**
Cedar Creek WAU, SUB-BASIN 9					
DNR MANAGED LAND	**2,064**	**312**	**59**	**~100**	**0**
PRIVATE OWNERSHIP	**7**	**UNKNOWN**	**UNKNOWN**	**UNKNOWN**	**UNKOWN**

TOTAL	**2,071**	**~312**	**~59**	**~100**	**~0**

In Cedar Creek sub-basin #9 the nearest regeneration harvest to Unit #1 is ¼ of a mile south, which is the Ramblin' Rose unit 3, a 27-acre unit. In Cedar Creek sub-basin #9 the nearest regeneration harvest to Unit #2 is ½ mile east, which is the Ramblin' Rose unit 3, a 27-acre unit. In Cedar Creek sub-basin #7 the nearest regeneration harvest to Unit #3 is 1/4 mile southeast, which is the Ramblin' Rose unit 4, a 69-acre unit.

<u>In addition:</u> Ongoing assessments of road maintenance needs within the Cedar Creek WAUs are taking place under the HCP and Forest Practices RMAP process.

To reduce the possibility that this proposal may contribute to an increased chance of environmental impact, several mitigation measures have been included in the proposal. Soils exposed during road construction will be seeded with grass and/or straw if it is determined necessary to control soil erosion. Ground based equipment may be restricted to slopes less than 35% during dry soil conditions. Haul routes for this proposal have also been evaluated for potential impact to the environment. To assure sediment delivery is controlled during active haul, multiple cross drains, sediment ponds, and other structures will be used where needed to disconnect ditch water from streams. Ditch water will be routed to the forest floor for filtering prior to entering watercourses. New road construction will be concentrated on stable ridge top locations and engineered to a higher standard than road construction in the past.

Furthermore, to preserve structural diversity for wildlife habitat, enhance fish habitat and limit the effect to aesthetic appearance, Riparian Management Zones, individual leave trees, and wildlife tree clumps will be identified for retention throughout the proposal. RMZs average 196 and 198 feet wide adjacent to three type 3 streams and at least 100 feet wide along one type 4 stream. The RMZs will help reduce sedimentation, provide a source of large organic debris (LOD) for the streams, provide shade, reduce the aesthetic impact, and provide other benefits to wildlife. Furthermore, individual leave trees and wildlife tree clumps have been identified for retention throughout the proposal to preserve structural diversity for wildlife habitat. There will be 1264 trees left within the sale area to meet the above retention tree objectives.

In addition to mitigation efforts incorporated into this proposal under the HCP and Forest Practices RMAP process, DNR will include contract language in this proposal to meet legal requirements of Forest Practices and Department of Ecology regarding sediment delivery to streams. This language addresses timing of operations, restrictions on impacts to soils (compaction/rutting), and requirements for sediment control devices and techniques.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (check one):

☐Flat, ☐Rolling, ☒Hilly, ☐Steep Slopes, ☐Mountainous, ☐Other:

1) General description of the WAU or sub-basin(s) (landforms, climate, elevations, and forest vegetation zone).

The Cedar Creek WAU is flat to hilly with elevations ranging from 80 to 2,600 feet. This WAU receives about 60 to 70 inches of precipitation a year. The majority (92%) of the slopes range from 0 to 65%; however, slopes of up to 90% can be found as well. The WAU is comprised primarily of Douglas-fir with the typical secondary species of red alder, redcedar, western hemlock, and big leaf maple. The WAU is in the western hemlock vegetation zone.

2) Identify any difference between the proposal location and the general description of the WAU or sub-basin(s).

The vicinity of the proposal matches the general description of the WAU and the sub-basins.

b. What is the steepest slope on the site (approximate percent slope)?

Approximately 70% on Unit #1.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland. *Note: The following table is created from state soil survey data. It is a roll-up of general soils information for the soils found in the entire sale area. It is only one of several site assessment tools used in conjunction with actual site inspections for slope stability concerns or erosion potential. It can help indicate potential for shallow, rapid soil movement, but often does not represent deeper soil sub-strata. The actual soils conditions in the sale area may vary considerably based on landform shapes, presence of erosive situations, and other factors. The state soil survey is a compilation of various surveys with different standards.*

State Soil Survey #	Soil Texture or Soil Complex Name	% Slope	Acres	Mass Wasting Potential	Erosion Potential
5670	CLAY LOAM	8-30	76	INSIGNIFICANT	MEDIUM
6640	SILT LOAM	65-90	26	HIGH	HIGH
1008	LOAM	8-30	21	LOW	MEDIUM
1007	LOAM	1-8	15	INSIGNIFICANT	MEDIUM
6638	SILT LOAM	5-30	15	INSIGNIFICANT	MEDIUM
5669	CLAY LOAM	1-8	3	INSIGNIFICANT	MEDIUM

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

1) Surface indications:

The soil stability model indicated no areas of potential high mass wasting in any of the units and this was verified by field observations. The slope stability model was field checked using a slope stability checklist and no areas of potential high mass wasting were found.

2) Is there evidence of natural slope failures in the sub-basin(s)?
☒*No* ☐*Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:*

No slope failures have been observed in either of the sub-basins.

3) *Are there slope failures in the sub-basin(s) associated with timber harvest activities or roads?*
☒*No* ☐*Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:*
Associated management activity:

None known.

4) *Is the proposed site similar to sites where slope failures have occurred previously in the sub-basin(s)?*
☒*No* ☐*Yes, describe similarities between the conditions and activities on these sites:*

5) *Describe any slope stability protection measures (including sale boundary location, road, and harvest system decisions) incorporated into this proposal.*

Roads will be crowned, ditched, and cross-drained. Soils exposed during construction will be seeded with grass as needed to control erosion. Ground tracked yarding will be restricted to slopes less than 35%. Lead end suspension shall be required on all cable settings. Most roads are located on or near ridge tops.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.
Approx. acreage new roads: ***12*** *Approx. acreage new landings:****0.25*** *Fill source:* ***Native Material***
See question A.11.c.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Incidental erosion may occur resulting from the yarding of logs, also soils being exposed during and after road construction; however prudent road location, construction, and maintenance as well as yarding restrictions will minimize erosion.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? *Approximate percent of proposal in permanent road running surface (includes gravel roads):*

Approximately 0.5% of the site will be covered with gravel road at the completion of harvest.

h. Propose measures to reduce or control erosion, or other impacts to the earth, if any:
(Include protection measures for minimizing compaction or rutting.)

The harvest area is designed to minimize impacts to soil and water. Roads are located on or near ridge tops to maximize the distance between the roads and streams. Roads will be constructed during dry weather conditions. Storm water runoff will be collected by road ditches and diverted through cross drain culverts and ditch outs onto the forest floor. In addition, culverts and ditch outs will be placed to minimize the amount of ditch water that may flow directly into stream channels. Dissipaters are placed at culvert outlets to reduce sedimentation and control erosion. Grass seed and straw bales will be placed on the exposed areas to minimize the potential for soil erosion.

Logging operations will be conducted in such a manner as to minimize ground disturbance. RMZs, leave tree areas, and the restoration requirements within the 30-foot Equipment Limitation Zone on five type 5 stream will help limit ground disturbance, provide filtration, and protect stream bank integrity. Shovel logging shall be in accordance with Shovel Logging Specifications on file at the region office. Lead end suspension will be required on all cable settings. Yarding shall be suspended when soil rutting becomes excessive as determined by the Contract Administrator. Any excessive disturbance shall immediately be water barred by hand, grass seeded, and yarding suspended until such time that the Contract Administrator can be shown that future yarding disturbance will be within the contract requirements. Any and/or all operation(s) of this sale may be temporarily suspended when, in the opinion of the Contract Administrator, there is the possibility of sediment being delivered to any running water that is tributary of fish bearing streams. The units will be planted within one year upon the completion of logging or regenerate naturally. Shovel yarding may not be permitted from September 30 to May 1, to minimize the potential for erosion, unless authorized in writing by the Contract Administrator. Riparian Management Zones averaging 196-198 feet wide along three type 3 streams and at least 100 feet wide adjacent to one type 4 stream will be left to protect water quality, maintain stream bank integrity and slope stability. (See 3.a.1.b.).

2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust *from truck traffic, rock mining, crushing or hauling,* automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

Minor amounts of engine exhaust will be emitted from logging equipment and dust will be created by vehicle traffic on roads. If landing debris is burned after harvest is completed, minor amounts of wood smoke will be generated. There will be no emissions once the sale is complete.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

No.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

If landing debris is burned, it will be in accordance with Washington State's Smoke Management Plan. A burn permit will be obtained before burning occurs.

3. Water

a. Surface:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. *(See timber sale map and forest practice base maps.)*

Unit 1: Appletree Creek, a type 3 stream, is located outside of the south boundary and flows northwest out of the proposal area and eventually flows east into the Cedar Creek, which flows into the Chehalis River. One type 5 stream originates outside the east boundary and becomes a type 4 stream before flowing into Appletree Creek. One type 5 stream starts in the unit on the west side and is joined by another type 5 before becoming a type 3 stream and flowing south into Appletree Creek.

Unit 2: Appletree Creek, a type 3 stream, is located outside of the boundary on the northeast corner of the unit and flows north out of the proposal area and eventually flows east into the Cedar Creek, which flows into the Chehalis River. Another type 3 stream, is located outside the west boundary and flows north into Appletree Creek. Two type 5 streams originate inside the west boundary and flow into the type 3 on the west side.

a) Downstream water bodies: **Appletree Creek is tributary to Cedar Creek, which flows into the Chehalis River.**

b) Complete the following riparian & wetland management zone table:

Wetland, Stream, Lake, Pond, or Saltwater Name (if any)	Water Type	Number (how many?)	Avg RMZ/WMZ Width in Feet (per side for streams)
Appletree Creek	**3**	**1**	**196-198**
Stream	**3**	**2**	**196**
Stream	**4**	**1**	**100**
Stream	**5**	**5**	**0**

c) List RMZ/WMZ protection measures including silvicultural prescriptions, road-related RMZ/WMZ protection measures, and wind buffers.

The Riparian Management Zones for this proposal will be designed in accordance with the Department's HCP procedures. The Riparian Management Zones along three type 3 streams average 196-198 feet wide and at least 100 feet wide along one type 4 stream. Appletree Creek and the type 3 stream on the west boundary of Unit #2 are both over 5 feet wide. Local knowledge of similar stands harvested in the past, within the vicinity of the sale area, indicate that wind throw disturbance has been infrequent in Riparian Management Zones adjacent to regeneration harvests; therefore, wind buffers will not be designated along the Riparian Management Zones on type 3 streams.

2) Will the project require any work over, in, or adjacent to (within 200 feet) to the described waters? If yes, please describe and attach available plans.
☐*No* ☒*Yes (See RMZ/WMZ table above and timber sale map.)*
Description (include culverts):

Cable lines could be suspended over three type 3 streams, one type 4 stream and five type 5 streams. Timber harvest will occur an average of 196-198 feet from the three type 3 streams and at least 100 feet from the one type 4 stream. Timber harvest will occur within 200 feet of five type 5 streams. One culvert will be removed from one type 5 stream during the abandonment of the E-2100 road.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

None.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. *(Include diversions for fish-passage culvert installation.)*
☒*No* ☐*Yes, description:*

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.
☒*No* ☐*Yes, describe location:*

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.
☒*No* ☐*Yes, type and volume:*

7) Does the sub-basin contain soils or terrain susceptible to surface erosion and/or mass wasting? What is the potential for eroded material to enter surface water?

The potential for surface and/or mass erosion exists in the headwaters of the sub basins, typically in headwalls with steep slopes of 30% to 65% or greater and/or where unstable soils are present. A majority of these sites occur near watercourses with deeply incised channels and steep headwall areas. A storm event could result in eroded material entering surface water. The potential for eroded material to enter surface water based on this proposal is low due to erosion control measures that will be included in the proposal. Furthermore, the terrain in the WAU is heavily vegetated and limits the occurrence of soil erosion; therefore, it is unlikely a significant amount of eroded material will enter surface water. In addition, it is unlikely any erodible material will enter flowing waters due to the harvest unit layout, road maintenance and abandonment, and Riparian Management Zones.

8) *Is there evidence of changes to the channels in the WAU and sub-basin(s) due to surface erosion or mass wasting (accelerated aggradations, erosion, decrease in large organic debris (LOD), change in channel dimensions)?*
☒*No* ☐*Yes, describe changes and possible causes:*

9) *Could this proposal affect water quality based on the answers to the questions 1-8 above?*
☐*No* ☒*Yes, explain:*

Yes. However, it is unlikely that this proposal will negatively impact stream and water quality. Riparian Management Zones averaging 196-198 feet along the three type 3 streams and at least 100 feet wide along the one type 4 stream will maintain stream bank integrity, provide shade, and recruit large woody debris (LWD). RMZs along the type 3 streams and one type 4 stream and incorporating items in B.1.h. and B.3.d. will reduce the likelihood that a significant amount of eroded material will enter surface waters mentioned in the proposal. 30-foot wide Equipment Limitation Zones utilized along five type 5 streams will help limit ground disturbance, provide filtration, and help maintain stream bank integrity.

10) *What are the approximate road miles per square mile in the WAU and sub-basin(s)?*

The Cedar Creek WAU contains 4.4 miles of road per square mile. The numbers of road miles per square mile in the sub-basins are unknown.

Are you aware of areas where forest roads or road ditches intercept sub-surface flow and deliver surface water to streams, rather than back to the forest floor?
☒*No* ☐*Yes, describe:*

In recent years an emphasis has been placed on using more cross-drain culverts both on new road construction and on existing road reconstruction. This has resulted in more ditch water being diverted back to the forest floor.

11) *Is the proposal within a significant rain-on-snow (ROS) zone? If not, **STOP HERE** and go to question B-3-a-13 below. Use the WAU or sub-basin(s) for the ROS percentage questions below.*
☒*No* ☐*Yes, approximate percent of WAU in significant ROS zone.*
Approximate percent of sub-basin(s):

12) *If the proposal is within the significant ROS zone, what is the approximate percentage of the WAU or sub-basin(s) within the significant ROS zone (all ownerships) that is (are) rated as hydrologically mature?*

13) *Is there evidence of changes to channels associated with peak flows in the WAU or sub-basin(s)?*
☒*No* ☐*Yes, describe observations:*

14) *Based on your answers to questions B-3-a-10 through B-3-a-13 above, describe whether and how this proposal, in combination with other past, current, or reasonably foreseeable proposals in the WAU and sub-basin(s), may contribute to a peak flow impact.*

Based on local knowledge and observations, past, current, or reasonable foreseeable proposals may slightly change the timing/duration/amount of peak flow, and flow rates may increase slightly during low and high flow periods due to decreased transpiration and interception. However, the unit size, Riparian Management Zones, and following Forest Resource Plan green-up policies and Forest Practices rules should limit contributions to peak flow.

15) *Is there water resource (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or downslope of the proposed activity that could be affected by changes in surface water amounts, quality, or movements as a result of this proposal?*
☒*No* ☐*Yes, possible impacts:*

16) *Based on your answers to questions B-3-a-10 through B-3-a-15 above, note any protection measures addressing possible peak flow/flooding impacts.*

Increases in the number of, and a reduction in the distance between culverts allow water to be removed from ditches and diverted onto the forest floor more frequently. The new road construction will be on or as near to stable ridge tops as possible. Establishing RMZs averaging 196-198 feet wide along three type 3 streams and at least 100 feet wide along one type 4 stream should help maintain bank stability and supply large organic debris, which helps control the rate of stream flow. Additionally, maintaining unit sizes less than 100 acres and providing 5 years for green-up before harvesting adjacent DNR stands will help decrease potential peak flow/flooding impacts. The largest unit within the 158-acre sales area is approximately 73 acres in size.

b. Ground *Water*:

1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.

Ground water will not be withdrawn or water will not be discharged into ground water.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

Insignificant amounts of oil and other lubricant could be inadvertently discharged as a result of heavy equipment use. No lubricants will be disposed of on site.

3) *Is there a water resource use (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or down slope of the proposed activity that could be affected by changes in groundwater amounts, timing, or movements as a result this proposal?*
☒*No* ☐*Yes, describe:*

a) Note protection measures, if any.

c. Water Runoff (including storm water):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Storm water runoff will be collected by road ditches and diverted onto the forest floor. Existing culverts and ditch outs have been placed to minimize the amount of ditch water that may enter into stream channels.

2) Could waste materials enter ground or surface waters? If so, generally describe.

Some logging slash may enter three type 3 streams one type 4 stream and five type 5 streams. Insignificant amounts of oil and other lubricants could be inadvertently discharged as a result of heavy equipment use.

a) Note protection measures, if any.

Slash will be removed by hand from flowing streams at the direction of the Contract Administrator. Equipment use will be limited along streams in accordance with Forest Practices Rules. No lubricants will be disposed of on site.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:
(See surface water, ground water, and water runoff sections above, questions B-3-a-1-c, B-3-a-16, B-3-b-3-a, and B-3-c-2-a.)

Storm water runoff will be collected by road ditches and diverted onto the forest floor. Culverts and ditchouts will be placed to minimize the amount of ditch water that may enter into stream channels. Existing culverts and ditch outs have been installed such that discharge is not concentrated at any location. Grass seed and straw bales will be placed on exposed soils to minimize erosion. Equipment Limitation Zones will be utilized to reduce the impacts of harvest along the five type 5 stream.

Logging operations will be conducted in such a manner as to minimize ground disturbance. Shovel logging shall be in accordance with Shovel Logging Specifications on file at the region office. Shovel yarding may not be permitted from September 30 to May 1 unless authorized in writing by the Contract Administrator. Lead end suspension will be required on all cable settings. Yarding shall be suspended when soil rutting becomes excessive. Any excessive disturbance shall immediately be water barred by hand, grass seeded, and yarding suspended until such time that the Contract Administrator can be shown that future yarding disturbance will be within the contract requirements. Any and/or all operation(s) of this sale may be temporarily suspended when, in the opinion of the Contract Administrator, there is the possibility of sediment being delivered to any running water that is tributary to fish bearing streams. The units will be planted within one year upon the completion of logging or seedlings will naturally regenerate. Riparian Management Zones averaging 196-198 feet wide adjacent to three type 3 streams and at least 100 feet wide along the one type 4 stream, will be left to reduce sediment delivery, loss of stream function, and loss of stream bank integrity. The potential for a greater amount of precipitation to directly infiltrate or to runoff will be lessened by trees within the RMZs and leave tree areas that will continue to intercept precipitation and by the limiting ground disturbance in those areas.

4. Plants

a. Check or circle types of vegetation found on the site:

☒deciduous tree: ☒alder, ☒maple, ☐aspen, ☐*cottonwood,* ☐*western larch,* ☐*birch,* ☐other:
☒evergreen tree: ☒*Douglas-fir,* ☐*grand fir,* ☐*Pacific silver fir,* ☐*ponderosa pine,* ☐*lodgepole pine,* ☒*western hemlock,* ☐*mountain hemlock,* ☐*Englemann spruce,* ☐*Sitka spruce,* ☒*red cedar,* ☐*yellow cedar,* ☐other:
☒shrubs: ☒*huckleberry,* ☒*salmonberry,* ☒*salal,* ☒*other:* Sword fern, wild rose, elderberry, Oregon grape, blackberry, vine maple.
☐grass
☐pasture
☐crop or grain
☒wet soil plants: ☐cattail, ☐buttercup, ☐bullrush, ☐skunk cabbage, ☒*devil's club,* ☐other:
☐water plants: ☐water lily, ☐eelgrass, ☐milfoil, ☐other:
☐other types of vegetation:
☐*plant communities of concern:*

b. What kind and amount of vegetation will be removed or altered? *(See answers to questions A-11-a, A-11-b, B-3-a-1-b and B-3-a-1-c. The following sub-questions merely supplement those answers.)*

All conifer and hardwood trees, except approximately 1264 wildlife leave and green recruitment trees, will be removed as part of this harvest proposal. Understory vegetation will be disturbed and/or reduced within the proposed harvest area as a result of timber felling, bucking, and yarding operations, but most of the vegetation will re-establish after the harvest is completed.

1) Describe the species, age, and structural diversity of the timber types immediately adjacent to the removal area. (See landscape/WAU and adjacency maps on the DNR website at: http://www.dnr.wa.gov under "SEPA Center.")

Unit #1: North is a 60+-acre thinning plantation, 70-years-old. Northeast is a 40+-acre Douglas-fir plantation, 18-years-old. East is an 80-acre Douglas-fir plantation, 7-years-old. Southeast is 90+-acres,

77-years-old. South across an RMZ is an 80+-acre Douglas-fir plantation, 15-years-old. West is 70+-acres of 74-year-old timber.

<u>Unit #2:</u> Northeast across an RMZ is a 30+-acre Douglas-fir plantation, 4-years-old. South, southwest, and east is 200+ acres of approximately 34-year-old timber. West across an RMZ is a 40+-acre plantation, 6-years-old.

<u>Unit #3:</u> North is a 50+-acre Douglas-fir plantation, 6-years-old. Northeast is a 90+-acres 73-years-old. East is a 150+-acres 72-years-old. Southeast is an 80-acre Douglas-fir plantation, 7-years-old. Southwest is a 40+-acre Douglas-fir plantation, 18-years-old. West is 70+-acres of 73 year old timber.

2) Retention tree plan:

To arrive at the number of trees to be left per acre, the number of tree over 12" (from the FRIS data) was multiplied by 7%. In all three units the number was less than 8, so eight trees will be left per acre. A total of 1264 Douglas-fir, western redcedar, western hemlock, and red alder will be left for green tree and snag recruitment. As directed by the Contract Administrator, the Purchaser will mark a portion of the wildlife trees on each unit. A minimum of 584 trees will be left on Unit #1, 222 pre-marked trees were left in scattered clumps and the purchaser will mark 362 trees. A minimum of 304 trees will be left on Unit #2, 187 pre-marked trees were left in scattered clumps and the purchaser will mark 117 trees. A minimum of 376 trees will be left on Unit #3, 64 pre-marked trees were left in scattered clumps and the purchaser will mark 312 trees. Wildlife trees may be chosen with defects such as split or broken tops, large diameters, and large limbs to enhance wildlife habitat potential. Wildlife trees were also chosen in areas to try and protect snags, down logs, and type 5 streams.

c. List threatened or endangered *plant* species known to be on or near the site.

None known.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Some ground vegetation in the sale area will be disturbed during logging. Required leave tree areas and Riparian Management Zones averaging 196-198 feet wide along the three type 3 streams and at least 100 feet wide along one type 4 stream, will preserve some of the existing vegetation. Reforestation of the units will occur within one year following harvest or will regenerate naturally.

5. Animal

a. Circle or check any birds animals *or unique habitats* which have been observed on or near the site or are known to be on or near the site:

birds: ☐hawk, ☐heron, ☐eagle, ☒songbirds, ☐*pigeon,* ☐other:
mammals: ☒deer, ☐bear, ☐elk, ☐beaver, ☐other:
fish: ☐bass, ☒salmon, ☒trout, ☐herring, ☐shellfish, ☐other:
unique habitats: ☐*talus slopes,* ☐*caves,* ☐*cliffs,* ☐*oak woodlands,* ☐*balds,* ☐*mineral springs*

b. List any threatened or endangered species known to be on or near the site *(include federal- and state-listed species).*

TSU Number	FMU_ID	Common Name	Federal Listing Status	WA State Listing Status
1	**42969**	**BULL TROUT**	**THREATENED**	**CANDIDATE**
2	**42970**	**BULL TROUT**	**THREATENED**	**CANDIDATE**

Bull trout habitat is adjacent to this proposal. However, bull trout habitat is protected under the Department of Natural Resources' Habitat Conservation Plan's Riparian Strategies.

c. Is the site part of a migration route? If so, explain.
☒*Pacific flyway* ☐*Other migration route:* *Explain if any boxes checked:*

This site is part of the Pacific flyway but is not used extensively for resting or feeding by waterfowl.

d. Proposed measures to preserve or enhance wildlife, if any:

By designing this sale to comply with the State's HCP, wildlife and wildlife habitat will be preserved and enhanced. The small unit design is conducive to ungulate feeding patterns. Scattered leave tree clumps are favorable to raptor perching, feeding, and nesting. Well engineered and built roads reduce potential water quality impacts for down stream fish populations. Grass seeding exposed soils should protect water quality and provide forage. Bounding out fish-bearing streams from the proposed harvest units will assist to protect water quality and provide wildlife habitat. Large diameter leave trees will enhance wildlife habitat value of the future stand. Riparian Management Zones averaging 196-198 feet wide along the three type 3 streams and at least 100 feet wide along one type 4 stream will protect water quality; provide corridors for wildlife; and maintain habitat for fish, reptiles, and other riparian obligate species.

1) Note existing or proposed protection measures, if any, for the complete proposal described in question A-11.

See B.5.d.

Species /Habitat: **RESIDENT FISH, ANADRAMOUS FISH, BULL TROUT**

Protection Measures:
RMZs averaging 196-198 feet wide on the three type 3 streams and at least 100 feet wide along one type 4 stream will protect water quality, provide corridors for wildlife, and maintain habitat for fish and reptiles.

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Does not apply.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

Does not apply.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

Does not apply.

7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

Minimal hazards incidental to operation of heavy machinery such as the risk of fire or small amounts of oil and other lubricants may be accidentally discharged as a result of heavy equipment use.

1) Describe special emergency services that might be required.

There are not any special emergency services required at this time. Pump trucks and/or pump trailers will be required on site during fire season. In the event of a lubricant spill, the Purchaser will contact DNR and the Department of Ecology.

2) Proposed measures to reduce or control environmental health hazards, if any:

No oil or lubricants will be disposed of on site. The cessation of operations may occur during periods of time when the risk of fire may increase. Fire tools and equipment will be kept on site during fire season. In the event of a lubricant spill, the Purchaser will contact the DNR and the Department of Ecology.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

Does not apply.

2) What types and levels of noise would be created by or associated with the project on a short-term or long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from this site.

Minimal noise levels associated with logging operations and truck traffic. There should be no long-term impacts.

3) Proposed measures to reduce or control noise impacts, if any:

None at this time.

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties? *(Site includes the complete proposal, e.g. rock pits and access roads.)*

Forest land.

b. Has the site been used for agriculture? If so, describe.

No.

c. Describe any structures on the site.

Does not apply.

d. Will any structures be demolished? If so, what?

Does not apply.

e. What is the current zoning classification of the site?

Forest land.

f. What is the current comprehensive plan designation of the site?

Long-term forestry.

g. If applicable, what is the current shoreline master program designation of the site?

Does not apply.

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

No.

i. Approximately how many people would reside or work in the completed project?

Does not apply.

j. Approximately how many people would the completed project displace?

Does not apply.

k. Proposed measures to avoid or reduce displacement impacts, if any:

Does not apply.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

This proposal has been designed in accordance with the current DNR Forest Resource Plan (July 1992), Final HCP (September 1997), current Forest Practices regulations and current county land use classifications.

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

Does not apply.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

Does not apply.

c. Proposed measures to reduce or control housing impacts, if any:

Does not apply.

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principle exterior building material(s) proposed?

Does not apply.

b. What views in the immediate vicinity would be altered or obstructed?

A view of standing mature timber will be changed to a view of an even-aged timber harvest with clumped wildlife trees, individual wildlife trees, and RMZs averaging 196-198 feet wide along three type 3 streams and at least 100 feet wide along one type 4 stream.

1) Is this proposal visible from a residential area, town, city, developed recreation site, or a scenic vista?
☒*No* ☐*Yes, viewing location:*

2) Is this proposal visible from a major transportation or designated scenic corridor (county road, state or interstate highway, US route, river, or Columbia Gorge SMA)?
☒*No* ☐*Yes, scenic corridor name:*

3) How will this proposal affect any views described in 1) or 2) above?

A view of standing mature timber will be changed to a view of a timber harvest with clumped wildlife trees, individual wildlife trees, and Riparian Management Zones, averaging 196-198 feet wide adjacent to the three type 3 streams and at least 100 feet wide along one type 4 stream.

c. Proposed measures to reduce or control aesthetic impacts, if any:

Leave trees will be left in clumps and individually scattered throughout the units. Riparian Management Zones will be left along the type 3 and type 4 streams. The units will be hand planted after harvest or naturally regenerate.

11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

Does not apply.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

Does not apply.

c. What existing off-site sources of light or glare may affect your proposal?

Does not apply.

d. Proposed measures to reduce or control light and glare impacts, if any:

Does not apply.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

There are no formal recreation trails through the units but informal recreational opportunities include hunting, berry picking, sightseeing, etc.

b. Would the proposed project displace any existing recreational uses? If so, describe:

Recreational activities may be temporarily interrupted during periods of operation on the site.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

None at this time.

13. Historic and Cultural Preservation

a. Are there any places or objects listed on, or proposed for national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

None have been identified.

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

None were found or are known to be on site.

c. Proposed measures to reduce or control impacts, if any:
(Include all meetings or consultations with tribes, archaeologists, anthropologists or other authorities.)

None at this time.

14. Transportation

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

Hauling will occur on the E-Line, E-2000, E-2100, E-2300, Spur 1, Spur 1A, Spur 1B, Spur 1C, Spur 1Z, Spur 2A, Spur 2B, Spur 3A, Spur 3B, Spur 3C, Spur 3D, Spur 3E, E-2100 Reroute, E-2100 extension, Vantage Pit Road, D-Line and Highway 12.

1) Is it likely that this proposal will contribute to an existing safety, noise, dust, maintenance, or other transportation impact problem(s)?

No.

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

No.

c. How many parking spaces would the completed project have? How many would the project eliminate?

Does not apply.

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

See A.11.

1) How does this proposal impact the overall transportation system/circulation in the surrounding area, if at all?

This proposal should not impact the overall transportation system in the surrounding area.

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No.

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

Approximately 10 to 15 log truck trips per day and 2 to 4 administrative trips per week will be generated until the completion of timber harvest. After the project is complete, the number of vehicular trips will return to present levels.

g. Proposed measures to reduce or control transportation impacts, if any:

None.

15. Public Services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

No.

b. Proposed measures to reduce or control direct impacts on public services, if any.

None.

16. Utilities

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

Does not apply.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

Does not apply.

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Completed by: **Steven D. Teitzel** **Forester 1** Date: **April 21, 2004**

Reviewed by: **State Lands Assistant** Date: **August 24, 2004**